

# **The Effect of Digital Leadership, organizational culture, digital competence and organization's commitment on Organizational Performance: Information Technology System in Indonesian Navy**

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## **Abstract**

The phenomenon of organizational performance within the TNI AL Headquarters has not been optimally assisted by the existence of existing information technology. The work process becomes less responsive because a lot is done manually. The purpose of this study is to explain the influence of digital leadership, digital competence and digital culture of crew members to improve the performance of the Indonesian Navy's organizations. The research sample was taken by purposive and cluster random sampling by selecting respondents who became operators or were involved in the use of information systems in their work units. The total sample of 445 respondents was obtained from 11 Navy's organizations of the Indonesian Navy Headquarters, which in total had a crew of 1,400 people, but the population involved in IT operations was approximately 800 people.

The results of this study indicate that digital leadership has a direct positive and insignificant effect on organizational performance, The direct effect is shown in the positive and insignificant direct influence of digital leadership on organizational performance; while the direct effect is positive and significant digital competence, and organizational commitment to organizational performance; negatively and significantly direct effect of digital culture on organizational performance within the Indonesian Navy Headquarters. Digital competence directly has a positive and significant effect on organizational performance as well as on organizational commitment. Digital culture has a direct and significant negative effect on organizational performance and organizational commitment. The novelty of this research, Organizational commitment has a direct positive and significant effect on organizational performance

**Key words:** digital leadership, organizational culture, digital competence, organization's commitment, organizational performance, Indonesian Navy, IT system

## **Introduction**

Digital leadership, digital competence, and organizational digital culture play a significant role in improving the performance of organizations in Indonesia. Digital leaders understand the importance of technology in driving business success and create a vision and strategy that leverages digital capabilities. According to Liao and Chen (2016) digital competence refers to the skills, knowledge, and attitudes required to effectively use technology for business purposes. Leonardus, et.al (2019) that situation of digital leadership, digital competence, and digital culture in the implementation of information technology in organizations can greatly impact the performance of these organizations. Effective digital leadership is essential to drive innovation and digital transformation, ensuring that technology is used to support business objectives and create competitive advantage. A digital culture that supports collaboration, innovation, and continuous learning can help organizations to quickly adapt to changes in the market and respond to new opportunities (Choundary, et.al 2020 and Pradana, 2022). However, implementing technology and digital initiatives can also present challenges, such as resistance to change, lack of digital skills, and integration with existing systems. By



developing digital leadership, digital competence, and a digital culture, organizations can improve their performance and competitiveness in the digital age (Javalgi & White, 2018). The performance of public sector organizations is not profit-oriented, but for the benefit of public services. Effectiveness in the organization related to the utilization of resources in pursuit of operational goals. Use of Internet Web applications in companies to increase work productivity and achieve company goals (Megawati & Nasri, 2015).

Based on previous studies and the phenomena mentioned above, the researcher considers that leadership factors, organizational digital culture and organizational commitment are the main causes of weak organizational performance, especially in the use of IT systems in the Indonesian Navy in supporting decision support systems. The use of application systems from the survey results shows that only 40% are currently used in the sense that they are used by the Satker, while the rest are in unused condition, not utilized, data is not updated, even 30% of IT servers have had their services turned off. However, the problem was found that the development of SPBE within the Indonesian Navy, with the many existing applications, was still partial, separate and not yet integrated. Related organizational performance is still considered low due to inefficient service. So it is still necessary to carry out the integration of the entire system so that it is efficient and effective. Organizational performance is strongly influenced by the mastery of information technology from employees of an organization (Choundary, 2020).

Organizational performance problems are thought to be influenced by several factors such as digital leadership, digital competence, digital culture, and organizational commitment. Commitment like this should be grown by the organization to its employees so that with a strong commitment they no longer need to be directed and supervised, because if they are committed, creativity and passion will appear to carry out their duties (Scheel, Vladova and Ullrich, 2022). Digital leadership is part of the company's management process with a leadership pattern that uses information technology as a medium in leading an organization as is done in modern organizations that utilize technology and innovation to direct business models (Yopan, 2022). The influence of organizational commitment to the implementation of an internal quality assurance system in tertiary institutions through organizational culture (Amtu et.al, 2021). leadership factors, A thorough study has been carried out by significant impact on the performance of organizations in utilizing IT systems, particularly in supporting decision support systems (Son et.al, 2020).

## Literature Review

**Digital Leadership.** Digital leadership is strategic leadership that utilizes company digital assets to achieve organizational goals. This leadership drives transformation within the company. Digital leadership is not just introducing the use of e-mail, websites and social media as part of daily work, but what is more important is utilizing data as an important asset (Zeike, 2019). Digital Leadership is leadership in the digital era that not only understands the concept of leadership but must be able to master soft skills (non-technical skills) and hard skills (technical skills) as well as data-based leadership in making decisions with indicators: a. communication skills; b. open minded; c. responsive to change; and d. dare to take risks. The digital leadership style using a situational approach is; (1) Measuring the level of readiness by providing general and basic tasks that the leader wants to achieve; (2) Applying a task-oriented leadership style or relationship with followers according to their level of readiness; and (3) Delegate followers with high levels of readiness to help supervise followers with low readiness if the work group grows large (Hassan & Hammed, 2022).

**Digital Competency,** Triebel, R., et al. that competence is a fundamental characteristic of a person, namely the causes associated with the reference criteria for effective performance (Triebel et.al, 2016). This fundamental characteristic means that competence is part of a person's personality that has been embedded and lasted a long time and can predict behavior in various tasks and work situations. Digital competence does not only consider the ability to handle digital resources technically, but also includes the competence of value-oriented behavior of members in a digital environment (Kozanoglu, DC; Abedin, 2020). Digital competence consists of technical competence, ethical competence and cognitive competence. First, 'technical competence' refers to how users can flexibly identify and deal with technical problems in a given digital environment (Szwajlik, 2021). Based on the description above, digital competency can be synthesized, namely the ability of the Indonesian Navy Satker to use IT technology to manage information effectively with indicators of knowledge, skills and attitudes.

**Digital Culture** Improved communication technology and cyber connections have changed the governance of work such as distribution, development and management. Likewise related to the perception of work that



involves work culture for people in an organization. Digital technology really colors the culture of the workplace, the way people work who have involved this digital technology to facilitate work, increase work effectiveness and increase the scope of work targets to be achieved. Disruption, innovation, turbulence, change, and competition are words that define the world today. This means that a wave of change to the realm of digital technology has already taken place, so we must be able to deal with it in order to survive (Putri & Ferdinand, 2021).

**Organization's Performance.** The organization's performance is a substantial concept in management studies, as it is still of interest to researchers since its appearance because it summarizes the results of the organization's activities within one indicator. referred to the organization's performance as a measure of progress and strategic development. It reflects the organization's success in achieving its planned goals by comparing them with actual results to identify weaknesses and address them. Moreover, it was defined as the organization's ability to achieve strategic goals effectively and efficiently through the optimal use of available resources (Jusman, 2022). Performance measures are well documented in the management literature, ie, financial indicators, employee satisfaction, customer satisfaction, quality, efficiency (Merendino & Melville, 2019), and effectiveness. However, performance is discussed in this study as a comprehensive concept that expresses the outcome of all aspects and activities of the organization, whether financial or non-financial.

### **Conceptual Framework**

In relation to the problems that will be studied in this study, the independent variables include: digital leadership (X1), digital competence (X2), organization digital culture (X3), Organizational commitment (X4) while the dependent variable is organization performance (Y).

Digital leadership has a direct and positive effect but not significant on organizational performance. There is a positive direct influence of leadership on performance. There is a positive relationship between transformational leadership style and the performance of the organizations (Madanchian et al., 2020). Transformational leadership has a positive effect on organizational commitment. Transformational leadership and organizational commitment have a positive and significant effect on organizational performance (Wangloan et al., 2022). Transformational, autocratic and democratic leadership styles were found to have a positive effect on organizational performance, while transactional, charismatic and bureaucratic leadership styles had a negative effect on organizational performance (Al Khajeh, 2019). Leadership style has a positive effect on the implementation of performance-based budgeting. E-leadership and organizational commitment have a positive and significant effect on performance. Digital leadership has a positive and significant effect on the Industrial Performance variable. From this opinion, this study proposes the first hypothesis as follows: H1: There is a positive and significant effect of digital leadership on organizational performance.

Laura Scheel, Gergana Vladova and Andre Ullrich about The Influence of Digital Competences, self-organization, and Independent Learning Abilities on Students' acceptance of digital learning, the research results show that digital competences, self-organization, and independent learning abilities have a positive influence and significant effect on students' acceptance of digital learning 7 (Scheel et al., 2022). Tamunoseimiebi Maxwell George, Emmanuel Okwu and Kolawole Francis Ogunbodede regarding Digital Literacy and Job Performance of Librarians in Rivers State University Libraries Nigeria shows that there is a relationship between digital literacy skills and librarian performance 21 (Ajuru, 2015). Jiatong Yu and Taesoo Moon about the Impact of Digital Orientation on Organizational Performance through Digital Competence, shows that in this study the positive influence of digital competence on organizational performance was found through empirical analysis<sup>22</sup> (Yu & Moon, 2021). From this opinion, this study proposes the first hypothesis as follows:

H2: There is a positive and significant influence of digital competence on organizational performance.

Arabeche, Ahlem Soudani and Mohammed El Amine Abdelli about Entrepreneurial Orientation, Organizational Culture and Business Performance in SMEs: Evidence from Emerging Economy, the results of the study show that organizational culture mediates the relationship between Entrepreneurial Orientation and business performance of Algerian manufacturing SMEs. Organizational culture has a positive and significant effect on business performance (Arabeche et al., 2022). This research only conducted research on



organizational environmental culture and Environmental Sustainability influencing environmental performance, and no research had been conducted on the influence of digital leadership and digital culture on improving organizational performance with commitment. From this opinion, this study proposes a third hypothesis as follows: The Green HRM factor is the most significant mediator in developing a favorable OEC relationship with ES and EP (Al Doghan et al., 2022). This research only conducted research on organizational environmental culture and Environmental Sustainability influencing environmental performance, and no research had been conducted on the influence of digital leadership and digital culture on improving organizational performance with commitment. From this opinion, this study proposes a third hypothesis as follows: and no research has been conducted on the influence of digital leadership and digital culture on improving organizational performance with commitment. From this opinion, this study proposes a third hypothesis as follows: and no research has been conducted on the influence of digital leadership and digital culture on improving organizational performance with commitment. From this opinion, this study proposes a third hypothesis as follows:

H3: There is a positive and significant influence of organizational digital culture on organizational performance

Dede Hertina, Mardi Mardi regarding Organizational Support, Commitment and Job Satisfaction to Employee Performance, the results of the study show that organizational support, organizational commitment and job satisfaction, directly and indirectly, affect employee performance through organizational citizenship behavior (Hertina & Mardi, 2021 ). Organizational commitment has a positive and significant effect on employee job satisfaction, Leadership style has a positive and significant effect on employee job satisfaction, Organizational commitment has a positive and significant effect on employee performance, Leadership style has a positive and significant effect on employee performance, organizational commitment is a factor mediating the relationship between leadership style and employee job satisfaction and organizational commitment mediates the relationship between leadership style and employee performance.

H4: There is a positive and significant effect of organizational commitment on organizational performance

## **Methodology Research**

This research uses a survey research approach to test the hypothesis of organization commitment, organization digital culture and digital leadership and organization performance. The research design used is a combination of descriptive and associative research. Descriptive research is intended to provide accurate explanations and descriptions of the facts that are present in each research variable, while associative research is intended to detect the extent of the correlation between the independent variable and the dependent variable.

This study also uses a correlational study to examine the correlation between the research variables. Hypothesis testing was also carried out to test the hypothesis against the hypotheses proposed in this study. In this study, a hierarchical regression analysis was also carried out to examine the effect of organization commitment (X4) on the influence of independent variables, namely digital leadership (X1), organization digital culture (X2), digital competence (X3) on the dependent variable organization performance (Y).

## **Sample**

Sampling in this study using cluster random sampling technique. Determining the sample size using a table of the number of samples based on the total population by Krejcie and Morgan (1970) 26 determined the number of samples that could be used in this study was 260 people (population of 800 people) or 302 people (1,400 people), but to obtain statistical data better, the sample will be taken 445 people. The sample in this study are Military/PNS personnel in the Navy's Work Unit who have an information system/application that is run in their work process, and are the operator of the information system/application. Variable measurement gives the value of the characteristics of the research object. Variable measurement describes the determination of the construct so that it becomes a variable that can be measured with the measurement scale it uses. There are four types of scale, namely nominal, ordinal, interval, and ratio. In this study the measurement scale used is the ordinal scale type. The Likert scale is used for alternative answers to each statement, in the form of: strongly agree (score 5), agree (score 4), disagree (score 3), disagree (score 2) and strongly disagree (score 1).

## Data analysis

The data analysis method used is Structural Equation Modeling Analysis (SEM) using the Analysis of Moment Structure (AMOS) version 23 program. According to Hair et al., (2018) 27, SEM is a technique that allows separate relationships for each set of dependent variables. That is, SEM provides a suitable and most efficient estimation technique for a series of separate multiple regression equations that are almost simultaneous. SEM is a modeling technique based on a concept or construction that is represented through several measurable variables in an integrated modeling, with a hybrid analysis process (including factor analysis, path analysis and regression). The process of this analysis is broadly divided into two aspects,

### Hypothesis test

Hypothesis testing using Amos is done by calculating the p-value, if the p-value is  $\leq 0.05$ , then the hypothesis is accepted, conversely if the p-value is  $> 0.05$ , then the hypothesis is rejected (Hair et al., 2010; Sekaran & Bougie, 2010). Hypothesis testing uses SEM AMOS to test the direct effect based on the t-value and to test the significance of the mediation or indirect effect using the Sobel Test Calculation. The basic conclusions are: a. If the t-value  $> 1.96$ , then the research hypothesis is accepted (supported). b. If the t-value  $\leq 1.96$ , then the research hypothesis is not supported (not supported).

## Results and Discussion

**Preliminary Test of Research Instrument Reliability.** The reliability test was carried out using the Cronbach's Alpha method with SPSS, provided that if the Cronbach's Alpha coefficient obtained is greater than the critical point of 0.7, then it is concluded that the variable is reliable, whereas if the Cronbach's Alpha value obtained is lower than the critical point of 0, 7, it is concluded that the variable is unreliable or unreliable (Hair et. al, 2010). If the alpha value is  $> 0.60$ , the test is reliable (Noor, 2014)

*Table 1. Reliable instrument test*

Variabel	Cronbach's Alpha	conclusion
Organization performance	0,929	reliable
Organization commitment	0,977	reliable
Digital leadership	0,951	reliable
Competence digital	0,966	reliable
Culture digital	0,977	reliable

Based on the results of data analysis on Table 1 the initial test of the reliability of organizational performance variables, organizational commitment, digital leadership, digital competence and digital culture, Cronbach's Alpha values were obtained greater than 0.7, so it can be concluded that the five variables in this study were reliable.

### Descriptive Statistics

Descriptive statistical analysis is used to describe the response of respondents in providing information on the value of each variable indicator. In this study, the statistical measures used in descriptive statistics to describe research data were the number of respondents, the minimum value, maximum value, mean and standard deviation (SD), skewness, kurtosis, skewness ratio and kurtosis ratio. The mean is intended to describe the average value of all respondents' responses, while the standard deviation is a variation of the respondent's response. If the standard deviation value given is close to zero, it indicates that the answers given by the respondents are getting less varied. However, if the standard deviation shows a number that is away from zero, it can be interpreted that the respondents' answers are increasingly varied.



**Table 2. Initial test of variable reliability**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
KIN1	35.67	13.126	.711	.833	.922
KIN2	35.87	12.464	.678	.844	.926
KIN3	35.83	12.695	.610	.891	.931
KIN4	35.63	12.792	.814	.879	.916
KIN5	35.87	12.326	.794	.834	.917
KIN6	35.77	12.323	.851	.836	.913
KIN7	35.57	12.875	.806	.922	.917
KIN8	35.53	13.292	.692	.719	.923
KIN9	35.60	12.938	.776	.808	.919

**Organizational Performance Variable Descriptive Statistics.** Descriptive statistics on organizational performance variables are a description of respondents' perceptions of organizational performance variables contained in the indicators formulated in statements on the questionnaire using a Likert Scale with a range of answer values 1 – 5. Organizational performance variables are measured through 3 dimensions, namely responsiveness on the KIN1 indicator, KIN2, KIN3, dimensions of responsibility with indicators KIN4, KIN5, KIN6, dimensions of accountability with indicators KIN7, KIN8, KIN9 Table 2.

**Organizational Commitment Variable Descriptive Statistics.** Descriptive statistics on the organizational commitment variable are descriptions of respondents' perceptions of the indicators of organizational commitment variables contained in the statements on the questionnaire formulated using a Likert Scale with a range of answer values 1 – 5. The results of data analysis of performance variables through 3 dimensions, namely Emotional/Affective Commitment with indicators CMT1, CMT2, CMT3, CMT4 dimensions Continuous commitment with indicators CMT5, CMT6, CMT7, CMT8 dimensions Normative commitment with indicators CMT9, CMT10, CMT11, CMT12

**Descriptive Statistics of Digital Leadership Variables.** Descriptive statistics on digital leadership variables are a description of respondents' perceptions of the digital leadership variable indicators contained in the statements on the questionnaire formulated using a Likert Scale with a range of 1 – 5 answer values. Digital leadership is measured through 4 dimensions, namely communication skills with the DL1 indicator, DL2, the dimension of open thinking with indicators DL3, DL4, DL5, the dimension of responsiveness to change with indicators DL6, DL7, DL8, the dimension of taking risks with indicators DL9, DL10.

**Digital Competency Variable Descriptive Statistics.** Descriptive statistics on digital competency variables are a description of respondents' perceptions of the indicators of compensation variables contained in the statements on the questionnaire formulated using a Likert Scale with a range of answer values 1 – 5. The results of data analysis on compensation variables through 4 dimensions, namely knowledge with KD1, KD2, KD3 indicators, skills dimensions with KD4, KD5, KD6 indicators, and attitude dimensions with KD7, KD8 KD9 indicators.

**Descriptive Statistics of Digital Culture Variables.** Descriptive statistics on digital culture variables are a description of respondents' perceptions of the indicators of digital culture variables contained in the statements on the questionnaire formulated using a Likert Scale with a range of 1 – 5. The results of data analysis on digital culture variables through 3 dimensions, namely innovation with indicators BD1, BD2, data-driven decision making dimensions with indicators BD3, BD4, collaboration dimensions with indicators BD5, BD6, digital first mindset dimensions with indicators BD7, BD8, and agility and flexibility dimensions with indicators BD9, BD10.

### Statistical Test Analysis

The data analysis used in this study is Structural Equation Modeling (SEM) to evaluate the criteria of goodness of fit, namely the level of suitability between the reality of research results in the field supported by a theoretical framework with research models developed with predetermined criteria. This study found that the values in the CR column univariately were not all in the range -2.58 to +2.58, but multivariately they were in that range. Therefore there is evidence that the distribution of this data is normal, so that this data is suitable for use in further evaluation. The normality test in the AMOS SEM is very sensitive to the large amount of data, in this case 445 data. According to Siswo Haryono (2017) SEM with the maximum likelihood estimation technique requires samples in the range of 100 – 200 samples, other opinions suggest around 150 – 400 samples. The normality test in this study also used the skewness and kurtosis in SPSS25, using the Kolmogorov-Smirnov and Shapiro-Wilk estimates. Statistical Test of Research Variables with SPSS 25 if using these conditions with a sample size of > 300 as Table 3.

*Table 3. Statistical Test of Research Variables*

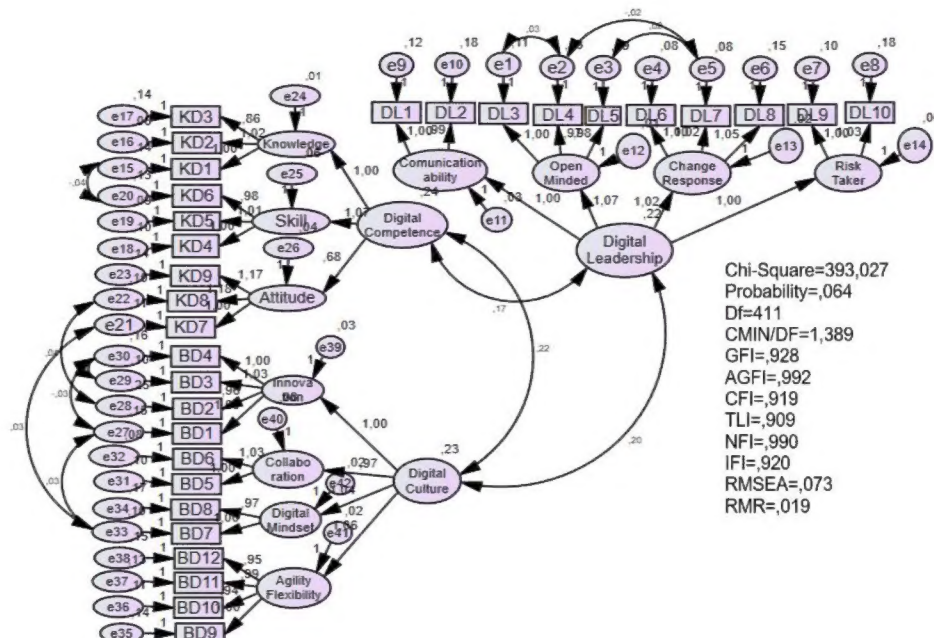
		Performance	Commitment	Leadership	Competence	Culture
N	Valid	445	445	445	445	445
	Missing	0	0	0	0	0
Mean		40.6966	54.5056	44.1708	39.2449	52.2449
Std. Deviation		3.59556	5.27429	5.05355	4.33099	6.09724
Skewness		-.443	-.561	-.524	-.216	-.416
Std. Error of Skewness		.116	.116	.116	.116	.116
Kurtosis		-.436	-.326	-.138	-.475	.106
Std. Error of Kurtosis		.231	.231	.231	.231	.231

Fulfills the condition with  $n > 300$ , using an absolute skewness value = -0.443 is in the -2 range interval  $-2 \leq x \leq 2$  (Ghozali, 2016) and absolute kurtosis = -0.436 is in the interval  $-2 \leq x \leq 2$  so the data is normal. One of the reasons why the data is not normal is the presence of outliers. Outliers are data that has extreme scores, both extreme high and extreme low. The existence of outliers can make the score distribution skewed to the left or right. Some experts consider that it is better to discard the data outliers, because there is a possibility that the subject will work at random, besides that the presence of data outliers also confuses statistical tests. However, some experts still support that outliers data must still be included in the analysis because the facts on the ground are like that. In this case, it will remove outliers that can confound the data, so that a normal distribution is obtained. Yap and Sim (2011) state that of several statistical techniques for testing normality, Shapiro-wilk is the most powerful technique.

### Analysis of Results

The statistical method used to test the hypothesis is the Multivariate Structural Equation Modeling (SEM) technique. The selection of SEM analysis techniques is adjusted to the formulation of the problem, objectives and research hypotheses, namely to test the direct and indirect effects between research variables 31. The software used in data processing and model testing is using AMOS 23.032 software. Construct Confirmatory Factor Analysis (CFA) Test 32,33





**Figure 1. Model\_CFA Construct diagram**

Output Amos 25 on Modification Indices (Group number 1 – Default Model) Appendix 6A can be selected as a covariance between e27 and e30; e29 with e30; e2 with e5; e3 with e5; e27 with e33; e15 with e20, e1 with e2; e21 with e33; and e22 and e28 which have the largest MI values, namely 37.1041 36.650 respectively; 34,423; 34,409; 33,16; 27,981; 27,277; 27.201 and 25.980 (between indicator variant errors) so that the Exogenous Construct Model\_2 CFA diagram is obtained as follows:

Figure 1 shows that Exogenous has no model identification problem. Thus it can be continued to test the significance of the dimensions and construct measuring indicators and test the construct validity of the output of Amos 25 on the Regression Weight: (Group number 1 – Default model) above, it can be seen that the dimensions of the exogenous constructs are all significant because they have a CR value  $\geq 1.96$  or probability (P)  $\leq 0.05$  or there is a \*\*\* sign. Likewise, all indicators are significant because they have a CR value  $\geq 1.96$  or probability (P)  $\leq 0.05$ . Meanwhile, from the output of Amos 25 on Standardized Regression Weight: (Group number 1 – Default Model) above, it can be seen that all indicators are valid because they have a standard factor loading  $\geq 0.5$  so that no indicator is dropped or removed from the exogenous construct in the next analysis.

**Table 4. Result Evaluation of Goodness of Fit (GoF) Model**

Criteria	Cut-off value	Model		Modified Model	
		Analysis	Evaluation Model	Analysis	Evaluation Model
<i>Absolute fit measure</i>					
$\chi^2$ -chi-square ( $\alpha=0,005$ )	$\leq 498,406$ ; $\leq 488,60$	647,955	Tidak Fit	393,027	Good Fit
Significant Probability	$\geq 0,05$	0,024	Tidak Fit	0,064	Good Fit
DF	$>0$	420	Over identified	411	Over identified
RMSEA	$\leq 0,08$	0,081	Good Fit	0,073	Good Fit
CMIN/DF	$\leq 2,0$	2,924	Tidak Fit	1,389	Good Fit
RMR	$\leq 0,05$	0,021	Good Fit	0,019	Good Fit
<i>Incremental fit measure</i>					
GFI	$\geq 0,90$	0,800	Marginal Fit	0,928	Good Fit
AGFI	$\geq 0,90$	0,864	Marginal Fit	0,992	Good Fit
TLI	$\geq 0,90$	0,889	Marginal Fit	0,909	Good Fit
CFI	$\geq 0,90$	0,899	Marginal Fit	0,919	Good Fit
NFI	$\geq 0,90$	0,870	Marginal Fit	0,990	Good Fit
IFI	$\geq 0,90$	0,900	Good Fit	0,920	Good Fit



Next, testing the feasibility of Model\_CFA Exogenous Constructs was carried out. From the path diagram in Figure 1 above, it can be seen that Model\_CFA of the Exogenous Construct has good goodness of fit, because it has a probability of Chi-Square greater than 0.05, which is 0.064. Likewise the values of DF, GFI, AGFI, CFI, TLI, CMIN/DF, and RMSEA have met the recommended values as shown in Table 6 of the following Goodness of Fit Index.

Model\_CFA The Exogenous Construct as Table 4 is an acceptable Model Fit. overall Goodness of Fit (GOF) can be assessed based on a minimum of 5 (five) criteria. In empirical research, a researcher is not required to meet all goodness of fit criteria, but depends on the judgment or decision of each researcher<sup>34</sup>. Meanwhile, according to Hair et.al. (2010) said that the use of 4 -5 criteria of goodness of fit is considered sufficient to assess the feasibility of a model, provided that each of the criteria of goodness of fit, namely Absolute Fit Indices, Incremental Fit Indices and Parsimony Fit Indices are represented<sup>35, 36, 37</sup>

### Hypothesis test

Hypothesis testing in this study uses the t-value for hypothesis testing significance as Table 5. The basic conclusions are: a. If the t-value > 1.96 or the Probability value (P) ≤ 0.05, then Ho is rejected (the research hypothesis is accepted/supported), and b. If the t-value ≤ 1.96, then the research hypothesis is not supported (not supported)

**Table 5. Hypothesis Testing from SEM Amos 23**

Hypothesis			Estimate	S.E.	C.R.	PLabel
Organization_Performance	<---	Digital_Leadership	,109	,084	1,291	,197
Organization_Performance	<---	Digital_Competence	,480	,188	2,552	,011
Organization_Performance	<---	Digital_Culture	-,363	,181	-2,001	,045
Organization_Performance	<---	Organization Commitment	,678	,113	5,982	***

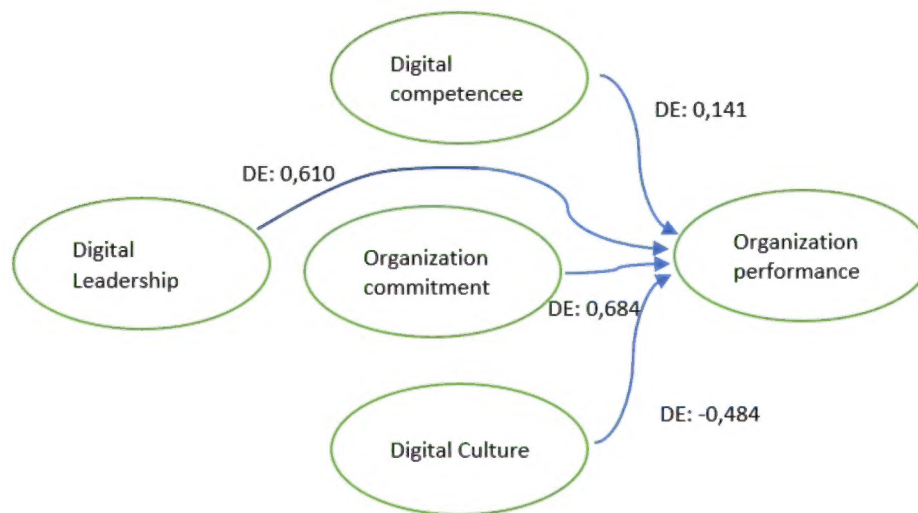
**Table 6. Hypothesis Testing Results**

Hypothesis	Description	Effect Coefficient (β atau γ)	Standard error	t statistik	P-value	Conclusion
H1	Digital leadership has direct positive and insignificant effect on organization performance in Indonesian Navy	0,141	0,084	1,291	0,197	H1 rejected
H2	Digital competence has direct positive and significant effect on organization performance in Indonesian Navy	0,610	0,188	2,552	0,011	H2 accepted
H3	Digital Culture has direct negative and significant effect on organization performance in Indonesian Navy	-0,484	0,181	2,001	0,045	H3 accepted
H4	Organization Commitment has significant and direct positive effect on organization performance in Indonesian Navy	0,684	0,113	5,982	***	H4 accepted



The results of testing the direct effect hypothesis without the influence of mediation variables, show that of the 6 direct effect hypotheses, the most significant direct effect is on H4 with a statistical t value of 5.982, so it can be interpreted that compared to digital leadership, digital competence and digital culture, organizational commitment has a positive direct effect and the most significant impact on organizational performance within the Indonesian Navy Headquarters. While digital leadership apparently has nothing to do (not significant) with improving organizational performance. Likewise, digital culture has a significant but negative effect on both organizational commitment and performance.

**Direct influence analysis**, indirect and total effect are intended to see how strong the influence of a variable is on other variables either directly or indirectly as Figure 2. Interpretation of these results will have important meaning for determining a clear strategy in improving organizational performance



**Figure 2. The direct effect of each variable.**

The direct effect of digital leadership, digital competence and digital culture on organizational commitment can be concluded that the direct effect of digital competence is greater on organizational commitment (by 1.184) than the direct effect of digital leadership on organizational commitment (by 0.559), even the direct effect of digital culture on organizational commitment is negative ( of -0.819). As for the direct effect of digital leadership, digital competence, digital culture and organizational commitment on organizational performance, it can be concluded that the direct effect of organizational commitment is greater on organizational performance (by 0.684) than the direct effect of digital competence (by 0.610) or digital leadership (by 0.141) and even digital culture which actually negative value (of -0.484).

First hypothesis examines the significance of the direct influence of digital leadership on organizational performance, with the following hypotheses:

H1. Digital leadership directly has a positive and non-significant effect on organizational performance within the Indonesian Navy Headquarters.

The test results show that digital leadership has no significant effect on organizational performance, as evidenced by the partial results of hypothesis testing on the effect of digital leadership on organizational performance, with a path coefficient value of 0.141 in a positive direction and a statistical t value of 1.291. Because the t statistic value of 1.291 is not greater than t table (1.96), it can be concluded that the first hypothesis is rejected. With the results of these tests, it can be concluded that even though the higher the respondent's assessment of digital leadership, the higher the organizational performance, and vice versa, this value is the lowest compared to the competence and digital culture variables. Thus it can be interpreted that organizational performance within the Indonesian Navy Headquarters is not influenced by digital leadership. The higher the respondent's assessment of communication skills, open thinking, responsive to change and willing to take risks, it turns out that organizational performance is not optimal, so that the capabilities of the digital aspects of a leader organization is not directly correlated to the increase in organizational performance. The results of this study are consistent with and consistent with the results of



previous research, namely research from Yopan et al. (2022) which states that digital leadership has no effect on business performance<sup>38</sup>. Bebitoglu (2021) concludes that in various industries there is no clear direct and strong relationship between leadership and business performance<sup>39</sup>. digital leadership has a direct and positive effect but not significant on organizational performance. Significant and negative influence of digital leadership style on employee performance. In addition, this study contradicts the theory put forward by Madanchian et al. (2020) who concluded that there is a positive relationship between leadership and organizational performance<sup>18</sup>. leadership has a positive effect on performance, leadership has a positive effect on implementing budget performance.

Second hypothesis test the significance of the direct effect of digital competence on organizational performance, with the following hypothesis:

H2. Digital competence directly has a positive and significant effect on organizational performance within the Indonesian Navy Headquarters.

The test results show that digital competence has a direct positive and significant effect on organizational performance, as evidenced by the partial results of hypothesis testing on the effect of digital competence on performance, obtaining a path coefficient value of 0.610 in a positive direction and a statistical value of 2.552. Because the t statistical value of 2.552 is greater than t table (1.96), it can be concluded that the second hypothesis is accepted. With the results of these tests, it can be concluded that the higher the level of digital competency on organizational performance, the higher the performance, and vice versa, the lower the digital competence, the lower the organizational performance. Thus it can be interpreted that organizational performance within the Indonesian Navy Headquarters is influenced by digital competence. The higher the digital competence of respondents to knowledge, skills and attitudes, the more organizational performance will be improved. The results of this study support the theory of Yu & Moon (2021), which concludes that digital competency has a positive effect on organizational performance. digital and economic growth<sup>40</sup>.

H3. Digital culture directly has a negative and significant effect on organizational performance within the Indonesian Navy Headquarters.

The test results show that digital culture has a direct and significant negative effect on organizational performance, as evidenced by the partial results of hypothesis testing on the effect of digital culture on organizational performance, a path coefficient value of -0.484 is obtained in a negative direction and the statistical t value obtained is 2.001. Because the value of the t statistic is 2.001 greater than t table (1.96), it can be concluded that the third hypothesis is accepted. With the results of these tests it can be concluded that the higher the respondent's perception of digital culture, the lower the performance, and vice versa the lower the respondent's perception of digital culture digital, the higher the performance. Thus it can be interpreted that organizational performance within the Indonesian Navy Headquarters is negatively influenced by digital culture. The higher the respondent's perception of innovation, data-based decision making, collaboration, and digital first mind set as well as agility and flexibility, the lower the organizational performance. Digital culture affects performance by 57%. Arabeche et al. (2022) stated that organizational culture has a positive and significant influence on business performance<sup>23</sup>. Al Doghan et al. (2022) stated that organizational environmental culture has a positive and significant influence on Human Resource Management<sup>24</sup>. and digital first mind set as well as agility and flexibility will further reduce organizational performance. Digital culture affects performance by 57%. Arabeche et al. (2022) stated that organizational culture has a positive and significant influence on business performance<sup>23</sup>. Al Doghan et al. (2022) stated that organizational environmental culture has a positive and significant influence on Human Resource Management<sup>24</sup>. and digital first mind set as well as agility and flexibility will further reduce organizational performance. Digital culture affects performance by 57%. Arabeche et al. (2022) stated that organizational culture has a positive and significant influence on business performance<sup>23</sup>. Al Doghan et al. (2022) stated that organizational environmental culture has a positive and significant influence on Human Resource Management<sup>24</sup>.

H4. Organizational commitment directly has a positive and significant effect on organizational performance within the Indonesian Navy Headquarters.



The test results show that organizational commitment has a direct positive and significant effect on organizational performance, as evidenced by the partial results of hypothesis testing on the effect of organizational commitment on organizational performance, a path coefficient value of 0.684 is obtained with a positive direction and the statistical t value obtained is 5.982. Because the value of the t statistic (5.982) is greater than the t table (1.96) it can be concluded that the fourth hypothesis is accepted. With the results of these tests it can be concluded that the higher the affective/emotional commitment, continuous commitment and normative commitment of the respondents, the higher the organizational performance, and vice versa. Thus it can be interpreted that organizational performance within the Indonesian Navy Headquarters is influenced by organizational commitment. Nikpour (2017), suggests that organizational commitment affects performance<sup>41</sup>. Nawal et al. (2021) stated that organizational commitment positively affects performance. Organizational commitment directly affects employee performance<sup>42</sup>.

## Conclusion and Recommendation

Based on the results of hypothesis testing, it can be concluded that four the hypothesis put forward in this study as a whole is proven and can be accepted. The direct effect is shown in the positive and insignificant direct influence of digital leadership on organizational performance; while the direct effect is positive and significant digital competence, and organizational commitment to organizational performance; negatively and significantly direct influence of digital culture on organizational performance within the Indonesian Navy Headquarters. The direct effect with the most significant positive t-value is in the effect of organizational commitment on organizational performance with a t-value of 5.882.

## Implications

Based on the research results, it can be stated that the theoretical implications and managerial implications of implementing policies related to digital leadership, digital competence, digital culture and organizational commitment will directly affect organizational performance. This study shows that the increase in organizational performance in the Indonesian Navy is influenced, among other things, by organizational commitment and digital competence. While digital culture and digital leadership cannot be said to have a significant direct effect, digital culture is even considered to reduce organizational performance. With regard to digital leadership aspects, although empirically it does not have much influence in improving performance, what needs to be paid attention to is that the communication skills of organizational leaders should be IT-based and provide the freedom for innovation of its members, a leader must be open-minded towards digitizing work, a leader should be sensitive and adapt to changes to the era digital. In addition, leaders must have the courage to take risks towards digital transformation.

## References

1. Liao, S., & Chen, Y. (2016). "The impact of IT capabilities, digital culture, and digital leadership on organizational performance: Evidence from SMEs in Taiwan". *Journal of Small Business Management*, 54(1), 56-76.
2. Leonardus WW Mihadjoa\* , Sasmoko Sasmoko b , Firdaus Alamsjahb and Elidjen Elidjen., Digital leadership role in developing business model innovation and customer experience orientation in industry 4.0, *Management Science Letters* 9 (2019) 1749–1762.
3. Choudhary, KK Singh, and SK Srivastava, (2020). A Study on the Impact of Digital Competency on Organizational Performance. *International Journal of Information Management*
4. Pradana M, Silvianita A, Syarifuddin S and Renaldi R (2022) The Implications of Digital Organizational Culture on Firm Performance. *Front. Psychol.* 13:840699. doi: 10.3389/fpsyg.2022.840699
5. Javalgi, RG, & White, DS (2018). "Digital leadership and digital culture: A review and research agenda". *Journal of Business Research*, 85, 15-25.
6. Megawati, & Nashri, MF (2015). Evaluation of Organizational Culture in the Application of Information Technology Using the Organizational Culture Assessment Instrument (OCAI) at PT Perkebunan Nusantara V Pekanbaru. *Journal of Information Systems Engineering and Management*, 1 Number 1(1), 17–30.



7. Scheel, L., Vladova, G., & Ullrich, A. (2022). The influence of digital competencies, self-organization, and independent learning abilities students' acceptance of digital learning. In *International Journal of Educational Technology in Higher Education* (Vol. 19, Issue 1). Springer International Publishing. <https://doi.org/10.1186/s41239-022-00350>
8. Yopan, M., Kasali, R., Balqiah, TE, & Pasaribu, M. (2022). The Role of Digital Leadership, Customer Orientation and Business Model Innovation for IoT Companies. *International Journal of Business*, 27(2), 1–22.
9. Amtu, O., Souisa, SL, Joseph, LS, & Lumamuly, PC (2021). Contribution of leadership, organizational commitment and organizational culture to improve the quality of higher education. *International Journal of Innovation*, 9(1), 131–157
10. Son, TT, Phong, LB, and Loan, BTT (2020). Transformational leadership and knowledge sharing: determinants of firm's operational and financial performance. *Sage Open* 10, 2158244020927426. doi: 10.1177/215824402092742
11. Zeike, S., Bradbury, K., Lindert, L., & Pfaff, H. (2019). Digital leadership skills and associations with psychological well-being. *International Journal of Environmental Research and Public Health*, 16(14), 1–12. <https://doi.org/10.3390/ijerph16142628>
12. Hassan, Hamed SA (2022). The role of digital leadership in the effectiveness of organizational crisis management, *Journal of Positive School Psychology*. Vol.6, No.4, 5373-79.
13. Triebel, R., Arras, K., Alami, R., Beyer, L., Breuers, S., Chatila, R., Chetouani, M., Cremers, D., Evers, V., Fiore, M., Hung, H., Ramirez, OAI, Joose, M., Khambhaita, H., Kucner, T., ... Zhang, L. (2016). SPENCER: A socially aware service robot for passenger guidance and assistance in busy airports. *Springer Tracts in Advanced Robotics*. [https://doi.org/https://doi.org/10.1007/978-3-319-27702-8\\_40](https://doi.org/https://doi.org/10.1007/978-3-319-27702-8_40)
14. Kozanoglu, DC; Abedin, B. (2020). Understanding the role of employees in digital transformation: Conceptualization of digital literacy of employees as a multi-dimensional organizational affordance. *J. Enterp. inf. Manag*, 1649–1672
15. Szwajlik, A. (2021). Identification and verification of the key methodology elements of measuring digital competences of ICT companies' customers. *Procedia Comput. Sci*, 3848–3855.
16. Putri, SR, & Ferdian, A. (2021). The Effect of Digital Culture on Employee Performance at Astra Credit Companies Pekanbaru the Effect of Digital Culture on. *E-Proceedings of Management*, 8(5), 4457–4462.
17. Jusman, IA (2022). The Role of Organizational Culture, Rewards, and Leadership Models to Employee Work Commitment. *Journal of Multidisciplinary Madani*, 2(3), 1521–1532. <https://doi.org/10.54259/mudima.v2i3.487>
18. Madanchian, M., Hussein, N., Noordin, F., & Taherdoost, H. (2020). Effects of virtuous leadership on organizational performance. *Positive Psychological Science: Improving Everyday Life, Well-Being, Work, Education, and Societies Across the Globe*, 145–158.
19. Wangloan, EH, Moeins, A., Marhalinda, M., & Endri, E. (2022). The Influence Of Transformational Leadership, Professional Ethics, And Work Competence On Organizational Commitment And Its Implications For The Performance Of Ship Safety. *Journal of Legal, Ethical and Regulatory Issues*, 25(1), 1–10.
20. Al Khajeh, EH (2019). Impacts of leadership styles on organizational performance. *New Trends in Management Studies*, 2018, 99–114. <https://doi.org/10.5171/2018.687849>
21. Ajuru, I. et al. (2015). Digital Literacy and Job Performance of Librarians in Rivers State University Libraries, Nigeria. *PaperKnowledge . Toward a Media History of Documents*, 3(April), 49–58
22. Yu, J., & Moon, T. (2021). Impact of digital strategic orientation on organizational performance through digital transformation capability. *ICIC Express Letters, Part B: Applications*, 12(9), 847–856.

23. Arabeche, Z., Soudani, A., Brahmi, M., Aldieri, L., Vinci, CP, & Abdelli, MEA (2022). Entrepreneurial Orientation, Organizational Culture and Business Performance in SMEs: Evidence from Emerging Economy. *Sustainability*(Switzerland), 14(9).<https://doi.org/10.3390/su14095160>
24. Al Doghan, MA, Abdelwahed, NAA, Soomro, BA, & Ali Alayis, MMH(2022). Organizational Environmental Culture, Environmental Sustainability and Performance: The Mediating Role of Green HRM and Green Innovation. *Sustainability*, 14(12), 7510.<https://doi.org/10.3390/su14127510>
25. Hertina, D., & Mardi, M. (2021). Organizational Support, Commitment And Job Satisfaction To Employee Performance Research. *Turkish Journal of Computer and Mathematics Education*, 12(8), 367–376.
26. Krejcie, RV, & Morgan, DW, (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurements*.
27. Hair, JF, Black, WC, Babin, BJ, Anderson, RE, Black, WC, & Anderson, RE (2018). *Multivariate Data Analysis*.<https://doi.org/10.1002/9781119409137.ch4>
28. Now, U., & Bougie, R. (2016). *Research Methods for Business: A Skill Building Approach*. John Wiley Sons Inc.
29. Yap, BW and Sim, CH (2011) Comparisons of Various Types of Normality Tests. *Journal of Statistical Computation and Simulation*, 81, 2141-2155.  
<https://doi.org/10.1080/00949655.2010.520163>
30. Field, A. (2009) *Discovering Statistics Using SPSS*. 3rd Edition, Sage Publications Ltd., London.
31. Stein CM, Morris NJ, Nock NL. Structural equation modeling. *Methods Mol Biol*. 2012;850:495-512. doi: 10.1007/978-1-61779-555-8\_27. PMID: 22307716.
32. Kang, H., 2019. Analysis and application of structural equation models using SPSS/AMOS.
33. RB Kline, *Principles and practice of structural equation modeling* (3rd ed.), Guilford Press, New York, NY (2011)
34. CL Shook, DJ Ketchen, GTM Hult, KM Kacmar An assessment of the use of structural equation modeling in strategic management research *Strat Manag J*, 25 (4) (2004), pp. 397-404,[10.1002/smj.385](https://doi.org/10.1002/smj.385)
35. K. Schermelleh-Engel, H. Moosbrugger, H. Müller. Evaluating the fit of structural equation models: tests of significance and descriptive goodness-of-fit measures. *Meth Psych Res*, 8(2) (2003), pp. 23-74
36. H. Lee, J. Im. Analysis of structural equation models and AMOS. *Jyphyunjae* (2011)
37. H. Kang. Discussions on the suitable interpretation of model fit indices and the strategies to fit models in structural equation modeling. *J Anal Soc Data Cor*, 15 (2) (2013), pp. 653-668
38. Yopan, M., Kasali, R., Balqiah, TE, & Pasaribu, M. (2022). The Role of Digital Leadership, Customer Orientation and Business Model Innovation for IoT Companies. *International Journal of Business*, 27(2), 1–22.  
[https://doi.org/10.55802/IJB.027\(2\).007](https://doi.org/10.55802/IJB.027(2).007)
39. BEBİTOĞLU, ME (2021). the Impact of Sparking Leadership on Business Performance Perceived By the Employees With Gender and Seniority Interaction. *International Journal of Management Economics and Business*, 18(2), 507–525.<https://doi.org/10.17130/ijmeb.964584>
40. Juhász, T., Kálmán, B., Tóth, A., & Horváth, A. (2022). Digital competence development in several countries of the European Union. *Management and Marketing*, 17(2), 178–192.<https://doi.org/10.2478/mmcks-2022-0010>
41. Nikpour, A. (2017). The impact of organizational culture on organizational performance: The mediating role of employee's organizational commitment. *International Journal of Organizational Leadership*, 6(1), 65–72. <https://doi.org/10.33844/ijol.2017.60432>
42. Nawal, A., Shoaib, M., Rehman, AU, & Zámečník, R. (2021). HRM Practices and Organizational Performance of Higher Secondary Educational Institutions: Mediating Role of Service Innovation and Organizational Commitment. *International Journal of Organizational Leadership*, 10, 313–330.<https://doi.org/10.33844/ijol.2021.60543>